

Message

From: Libelo, Laurence [Libelo.Laurence@epa.gov]
Sent: 11/29/2017 4:20:14 PM
To: Lindstrom, Andrew [Lindstrom.Andrew@epa.gov]; Garvey, Mark [Garvey.Mark@epa.gov]
CC: Strynar, Mark [Strynar.Mark@epa.gov]
Subject: RE: Draft GenX Paper for OECA Briefing With SDWA/CWA/ TSCA/RCRA

This is the same as PFOA. DuPont used the NH₄ salt of PFOA, not PFOA. When released it ionizes to the octanoate ion which is what is measured.

From: Lindstrom, Andrew
Sent: Wednesday, November 29, 2017 11:17 AM
To: Garvey, Mark <Garvey.Mark@epa.gov>; Libelo, Laurence <Libelo.Laurence@epa.gov>
Cc: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: RE: Draft GenX Paper for OECA Briefing With SDWA/CWA/ TSCA/RCRA

Mark,

The HFPO dimer acid has a pKa of about 3.8 (attachment 1), so in any biological relevant context (surface water, blood serum, tissue) it's going to be found as the anionic form (R-COO⁻) with whatever cation it might have once had (H⁺, K⁺, NH₄⁺) being long gone. The same is true for what the mass spec sees – it's only getting signal from the anionic form.

The first paper has some generic ethers.

The second paper shows some of the “new” ethers associated with Chemours operation in North Carolina in Figure S1.

The third paper has more.

Thank you,

Andy

From: Garvey, Mark
Sent: Wednesday, November 29, 2017 10:52 AM
To: Libelo, Laurence <Libelo.Laurence@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>
Cc: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: RE: Draft GenX Paper for OECA Briefing With SDWA/CWA/ TSCA/RCRA

Thanks Laurence.

There's a lot of info there.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Mark

Mark Garvey

EPA Headquarters
Office of Civil Enforcement
Attorney
202-564-4168
garvey.mark@epa.gov

NOTE: This email and its attachments may contain confidential information, attorney-work product, enforcement sensitive material or privileged information.

From: Libelo, Laurence

Sent: Wednesday, November 29, 2017 9:48 AM

To: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Garvey, Mark <Garvey.Mark@epa.gov>

Cc: Strynar, Mark <Strynar.Mark@epa.gov>

Subject: RE: Draft GenX Paper for OECA Briefing With [REDACTED]

Hi Mark,

DON'T SAY GENx!!

"Genx is a technology....that includes a new surfactant, the HFPO dimer acid NH4 salt...."

Say "HFPO dimer acid and its NH4 salt" if you only want to talk about the P-09 chemicals. If you want to take about the [REDACTED]

[REDACTED] This is what exists in water, not the acid or salt. This is also formed when HFPO acid fluoride, Ca salt, K salt or any other related ionic compound is put in water.

Andy, correct me if I am wrong but I think the anion is what is measured, not the protonated acid.

OK, Getting down off my soapbox – to answer your question -

As Andy says there is not a [REDACTED] method for PFOA and PFOS the analysis procedure it has to go through a fairly long approval process. The HFPO dimer acid and related ethers have not been through the processes so there is not yet a Standard Method.

I think the 537 method took several years to get approved after the chemists had it all worked out. [REDACTED]

As Andy says there are commercially available analytical standards so the HFPO dimer acid analysis is being done by a lot of labs. The results are good [REDACTED] The analysis is not that difficult really.

I am not sure [REDACTED] statement. The method Andy and Mark are using is a valid EPA method. [REDACTED]

A couple of other points – We know a lot more than we did in July.

The HFPO dimer acid precursors are clearly being discharged. ORD is finding some so they are coming out. I agree that the HFPO dimer acid may be formed in the sumps as Chemours states but I am sure that the reaction is not 100% complete. Some of the reactants are discharged as well as the products.

Other media have been analyzed and the HFPO dimer acid is present in them as well as water. It should be noted that soil, groundwater and air also have it.

The release to air should be included. 70,000 lbs to air is significant. It means that there is widespread contamination, not just the surface water discharges.

Chemours produces the HFPO dimer acid and NH4 salt and a number of other fluoroethers that can form the HFPO

[REDACTED]

It would be better to say [REDACTED]

[REDACTED]

I also would very strongly suggest that the discussion include the other fluoroethers. Some of them are a lot worse than the HFPO dimer acid.

From: Lindstrom, Andrew

Sent: Wednesday, November 29, 2017 8:48 AM

To: Garvey, Mark <Garvey.Mark@epa.gov>; Libelo, Laurence <Libelo.Laurence@epa.gov>

Cc: Strynar, Mark <Strynar.Mark@epa.gov>

Subject: RE: Draft GenX Paper for OECA Briefing [REDACTED]

Mark,

I don't think there is an official OW or OLEM method yet, but the approach outlined in the attached paper works well.

Most importantly, there is an analytical standard available (hfpoa document attached) so lots of commercial labs are doing it now.

Please let me know if you have other questions.

Thank you,

Andy

From: Garvey, Mark

Sent: Wednesday, November 29, 2017 8:43 AM

To: Libelo, Laurence <Libelo.Laurence@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>

Subject: FW: Draft GenX Paper for OECA Briefing With [REDACTED]

Lawrence and Andrew,

In the email below, the water staff from Region 4 says the following -

Ex. 7(A)

I'm trying to figure this out. Can you help me?

Mark

Mark Garvey

EPA Headquarters
Office of Civil Enforcement
Attorney
202-564-4168
garvey.mark@epa.gov

NOTE: This email and its attachments may contain confidential information, attorney-work product, enforcement sensitive material or privileged information.

From: Shell, Karrie-Jo

Sent: Wednesday, November 29, 2017 8:27 AM

To: Garvey, Mark <Garvey.Mark@epa.gov>; Speir, Jeffrey <speir.jeffrey@epa.gov>; Schwartz, Paul <Schwartz.Paul@epa.gov>; Fite, Mark <Fite.Mark@epa.gov>; Hall, Renea <Hall.Renea@epa.gov>; Jones, Aaryn <Jones.Aaryn@epa.gov>; George, Verne <George.Verne@epa.gov>; [REDACTED]

[REDACTED] uchovnay, Andrew <Duchovnay.Andrew@epa.gov>; Davis, Lauren O. <Davis.LaurenO@epa.gov>; Bean, Mark <Bean.Mark@epa.gov>; Schulz, Susan <Schulz.Susan@epa.gov>; Toney, Anthony <Toney.Anthony@epa.gov>; Bookman, Robert <Bookman.Robert@epa.gov>
Cc: Davis, Molly <Davis.Molly@epa.gov>; Allenbach, Becky <Allenbach.Becky@epa.gov>; [REDACTED]

Subject: RE: Draft GenX Paper for OECA Briefing With [REDACTED]

1. Minor edit: **Ex. 5 Deliberative Process (DP)**

Ex. 5 Deliberative Process (DP)

2. The document states :”In June 2017, Chemours told North Carolina officials that it had stopped discharging GenX precursors into the Cape Fear River from the Fayetteville Works Facility.”

Ex. 5 Deliberative Process (DP)

Karrie-Jo Robinson-Shell, P.E.
Environmental Engineer
US EPA Region 4
Water Protection Division
61 Forsyth Street
Atlanta, GA 30303
(404) 562-9308

From: Garvey, Mark

Sent: Tuesday, November 28, 2017 5:25 PM

To: [REDACTED] Schwartz, Paul <Schwartz.Paul@epa.gov>; Shell, Karrie-Jo <Shell.Karrie-Jo@epa.gov>; Fite, Mark <Fite.Mark@epa.gov>; Hall, Renea <Hall.Renea@epa.gov>; Jones, Aaryn <Jones.Aaryn@epa.gov>; George, Verne <George.Verne@epa.gov> [REDACTED]

Davis, Lauren O. <Davis.LaurenO@epa.gov>; Bean, Mark <Bean.Mark@epa.gov>; Schulz, Susan <Schulz.Susan@epa.gov>; Toney, Anthony <Toney.Anthony@epa.gov>; Bookman, Robert <Bookman.Robert@epa.gov>
Cc: Davis, Molly <Davis.Molly@epa.gov>; Allenbach, Becky <Allenbach.Bekky@epa.gov>; Oif, Leslie <Oif.Leslie@epa.gov>

Subject: RE: Draft GenX Paper for OECA Briefing With [REDACTED]

To Region 4 TSCA & Water teams,

Ex. 7(A)

Please note that this is not a meeting requesting senior management direction, but rather an informational briefing for Susan Bodine.

Thanks,
Mark

Mark Garvey
EPA Headquarters
Office of Civil Enforcement
Attorney
202-564-4168
garvey.mark@epa.gov

NOTE: This email and its attachments may contain confidential information, attorney-work product, enforcement sensitive material or privileged information.

From: [REDACTED]
Sent: Tuesday, November 28, 2017 12:08 PM
To: Schwartz, Paul <Schwartz.Paul@epa.gov>; Shell, Karrie-Jo <Shell.Karrie-Jo@epa.gov>; Fite, Mark <Fite.Mark@epa.gov>; Hall, Renea <Hall.Renea@epa.gov>; Jones, Aaryn <Jones.Aaryn@epa.gov>
Cc: Davis, Molly <Davis.Molly@epa.gov>; Allenbach, Becky <Allenbach.Bekky@epa.gov>; Garvey, Mark <Garvey.Mark@epa.gov>
Subject: Draft GenX Paper for OECA Briefing

Hello, Region 4 Water Team:

Ex. 7(A)

Unfortunately, the deadline to send up the briefing paper is tight. Please provide any feedback you may have to me and Mark Garvey (cc'd) by Thursday, November 30 at noon. I apologize about the timing.

Please let me know if you have any questions or if you would like to discuss this further.

[REDACTED]

[REDACTED]

Attorney-Adviser
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OECA – OCE – Water Enforcement Division
1200 Pennsylvania Avenue, NW (2243-A)
Washington, DC 20460
(202) 56 [REDACTED]

[REDACTED]